

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A method for performing discontinuous transmission (DTX) in ~~[[a]]~~ an adaptive multi-rate (AMR) communications system in which source data ~~in a first step~~ is channel encoded and ~~in a second step~~ is interleaved for transmission from a first component in the system to a second component in the system, the method comprising the steps of:

detecting by the first component, periods of source data inactivity; and
transmitting silence descriptor (SID) frames from the first to the second component during the periods of source data inactivity, wherein the SID frames include codec mode information; and

wherein certain of the SID frames ~~prior to transmission~~ are interleaved using a different interleaving algorithm as compared to that used for the channel encoded source data.

2. (Currently Amended) The method of claim 1, wherein the source data is block diagonally interleaved, and wherein certain of the SID frames are block interleaved ~~using block rectangular interleaving~~.

3. (Original) The method of claim 1, wherein the SID frames include comfort noise (CN) parameters.

4. (Currently Amended) The method of claim 1, wherein the step of transmitting silence descriptor (SID) frames includes ~~including~~ the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity;
and
transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

5. (Canceled)

6. (Currently Amended) The method of claim 1, wherein each SID frame includes a bit pattern ~~to distinguish the SID frame from the source data frames for~~
identifying the SID frame as a particular type of SID frame.

7. (Original) The method of claim 6, wherein the bit patterns are gross bit patterns.

8. (Original) The method of claim 1, wherein the source data is speech, and wherein the communications system is one of a Time Division Multiple Access (TDMA) wireless system, a Frequency Division Multiple Access (FDMA) wireless system, and a Code Division Multiple Access (CDMA) wireless system.

9. (Original) The method of claim 1, wherein escape frames are transmitted to effect configuration changes, and wherein an escape frame can replace a source data frame, a SID frame, or a no-transmission (NoTX) frame.

10. (Original) The method of claim 9, wherein SID frames are block interleaved, and wherein escape frames are block diagonally interleaved.

11. (Currently Amended) The method of claim 9, wherein ~~the communications system is an adaptive multi-rate (AMR) system, and wherein~~ an escape frame is used to change ~~a codec mode~~ an active codec set.

12. (Currently Amended) The method of claim 9, wherein ~~the communications system is an adaptive multi-rate (AMR) system, and wherein~~ an escape frame is used to change a phase of codec mode information.

13. (Original) The method of claim 1, wherein active speech source data is block diagonally interleaved, and wherein unused bits within the interleaving scheme for a last speech frame are used for a specific bit pattern to mark end of speech, and wherein unused bits within the interleaving scheme for a first frame are used for a specific bit pattern to mark beginning of speech.

14-15. (Canceled)

16. (Currently Amended) A method for effecting configuration changes in an adaptive multi-rate (AMR) ~~In a~~ communications system in which speech source data is transmitted from a first component to a second component, ~~a method for effecting configuration changes~~, said method comprising the step of:

transmitting by the first component, an escape frame in place of a speech source data frame to indicate a configuration change to the second component, the escape frame including codec mode information and a gross bit pattern to distinguish the escape frame from speech data frames ~~and conveying a configuration change indication.~~

17. (Original) The method of claim 16, wherein the escape frame further includes a data field to indicate to the second component a particular configuration change to be made.

18. (Currently Amended) The method of claim 16, wherein the ~~communications system is an adaptive multi-rate (AMR) system, and wherein an~~ escape frame is used to change ~~a codec mode~~ an active codec set.

19. (Currently Amended) The method of claim 16, wherein the ~~communications system is an adaptive multi-rate (AMR) system, and wherein an~~ escape frame is used to change a phase of codec mode information.

20. (Currently Amended) The method of claim 16, further comprising the step of:

transmitting silence descriptor (SID) frames from the first to the second component during periods of source data inactivity,

wherein the first component selectively transmits an escape frame ~~can to~~ replace a source data frame, a SID frame, or a no transmission (NoTX) frame.

21-22. (Canceled)

23. (Currently Amended) The method of claim 20, wherein the step of transmitting SID frames includes ~~including~~ the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity;
and

transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

24. (Canceled)

25. (Currently Amended) A transmission component for transmitting channel encoded and interleaved source data frames to a receiving component in an adaptive multi-rate (AMR) speech—communications system, said transmission component comprising:

~~a first component transmitting channel encoded and interleaved speech data frames; and~~

a second component receiving the channel encoded and interleaved speech data frames;

wherein the first component detects periods of speech inactivity and transmits silence descriptor (SID) frames instead of the channel encoded and interleaved speech data frames during the periods of speech inactivity, and wherein of the SID frames prior to transmission are interleaved using a different interleaving algorithm as compared to that used for the channel encoded speech data frames

means for detecting periods of source data inactivity; and

means for transmitting interleaved silence descriptor (SID) frames during the periods of source data inactivity, wherein the SID frames include codec mode information;

wherein at least some of the SID frames are interleaved using a different interleaving algorithm as compared to that used for the channel encoded source data frames.

26. (Currently Amended) The method transmission component of claim 25, wherein the channel encoded speech source data frames are block diagonally interleaved, and wherein said at least some of the SID frames are block interleaved using block rectangular interleaving.

27. (Currently Amended) A transmission component for transmitting source data frames to a receiving component in an adaptive multi-rate (AMR) communications system, said transmission component comprising:

a first component transmitting source data;

a second component receiving the source data;

means for transmitting wherein the first component transmits an escape frame in place of a source data frame to indicate a configuration change to the second receiving component, and

wherein the escape frame includes codec mode information and a gross bit pattern to distinguish the escape frame from source data frames.

28. (Currently Amended) The ~~method~~ transmission component of claim 27, wherein the escape frame further includes a data field to indicate to the second component a particular configuration change to be made.

29. (New) The transmission component of claim 27, wherein the codec mode information includes a codec mode indication that indicates a presently applied codec mode.

30. (New) The transmission component of claim 27, wherein the codec mode information includes one of:

a codec mode command that indicates a codec mode to be used for transmission from the receiving component to the transmission component; and

a codec mode request that indicates a codec mode that is preferred for transmission from the receiving component to the transmission component.

31. (New) The method of claim 16, wherein the codec mode information includes a codec mode indication that indicates a presently applied codec mode.

32. (New) The method of claim 16, wherein the codec mode information includes one of:

a codec mode command that indicates a codec mode to be used for transmission from the second component to the first component; and

a codec mode request that indicates a codec mode that is preferred for transmission from the second component to the first component.

33. (New) The method of claim 20, wherein when the escape frame replaces the SID frame, the method includes rescheduling the SID frame for transmission following transmission of the escape frame.

34. (New) The method of claim 23, wherein the step of transmitting an escape frame includes:

filling a first set of otherwise unused bits with a bit pattern indicating the third type of SID frame in order to ensure detection of a transition from source data inactivity to source data activity; and

filling a second set of otherwise unused bits with a bit pattern indicating the first type of SID frame if source data inactivity continues.